2881
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Phoenix, Arizona

Applicant:	Hoki Kwon.	**Group:**	2881.
Serial No.:	10/078474	**Examiner:**	t.b.d.
Filed:	2-21-2002	**Atty Docket No.:**	V637 02769 US
For:	LONG WAVELENGTH VCSEL GROWN BY MOCVD USING ALPSB/GAPSB AS BOTTOM MIRROR AND GAAS/AL(GA) AS TOP MIRROR		

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In accordance with Applicants' duty of disclosure under 37 C.F.R. §1.56, you will find attached hereto form PTO-1449, listing information which may be material to the patentability of this application, previously filed.

1. Preliminary Statements.

The filing of this Information Disclosure Statement shall not be construed as a representation that a search has been made (37 CFR § 1.97(g)), an admission that the information cited is, or is considered to be, material to patentability as defined in 37 C.F.R. § 1.56 (37 C.F.R. § 1.97(h)), or that no other material information exists.

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2. Form PTO-1449, List of Prior Art Cited by Applicant, citing 1 U.S. patent, 0 Foreign patents and 10 publications.

PTO/SB/08A (04-03)
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(USE AS MANY SHEETS AS NECESSARY)

Sheet	2	Of	2

COMPLETE IF KNOWN	
Application Number	10/078,474
Filing Dat	February 21, 2002
First Named Inventor	Hoki Kwon
Group Art Unit	2881
Examiner Name	t.b.d.
Attorney Docket Number	V637 02769 US

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T[2]
		International Search Report, dated 08-09-2003, relative to PCT application No. PCT/US 03/05368, the foreign equivalent to the instant U.S. application 10/078474.	
		AKIYAMA, M., et al., "Growth of high quality GaAs layers on Si substrates by MOCVD:, article, Journal of Crystal Growth, Vol 77, 1986, pgs 490-7.	
		BOUCART J et al. "Metamorphic DBR and Tunnel-Junction Injection: A CW RT Monolithic Long-Wavelength VCSEL" IEEE Journal of Selected Topics in Quantum Electronics, IEEE Service Center, US, vol. 5 no. 3 May 1999 pages 520-528	
		BOUCART, J., et al., "Optimization of the metamorphic growth of GaAs for long wavelength VCSELs", article, Journal of Crystal Growth, 201-202, 1999, pgs 1015-9.	
		DEMEESTER, P. et al., "GaAs on InP: a promising material combination", article, Chemtronics, Vol 4, Mar 1989, pgs 44-8.	
		GEBRETSADIK H et al. "Growth of High-Quality GAAS/ALAS Bragg Mirrors on Patterned Inp-Based Quantum Well Mesa Structures" Applied Physics Letters, American Institute of Physics. New York, US, vol. 71, no. 5, August 4, 1997 pages 581-583	
		GOLDSTEIN L. et al. "Metamorphic GAAS/ALAS Bragg Mirrors Deposited on INP For 1,3/1,55 Mum Vertical Cavity Lasers" Digest IEEE / LEOS Summer Topical Meetings, XX, XX, August 11, 1997 pages 49-50	
		GOLDSTEIN, L., et al., "GaAlAs/GaAs metamorphic Bragg mirror for long wavelength VCSELs", article, Electronics Letters, Vol 34, No 3, Feb 5, 1998, pgs 268-70.	
		SHIMOMURA, H., et al., "High-reflectance AlPSb/GaPSb distributed Bragg reflector mirrors on InP grown by gas-source molecular beam epitaxy", article, Electronics Letters, Vol 30, No 4, Feb 17, 1994, pgs 314-5.	
		STARCK, C., "Fabrication of 1.55 μm oxidized VCSELs with top metamorphic GaAs/GaAlAs and bottom InP/InGaAsP Bragg reflectors", article, IEEE 10th International Conference on Indium Phosphide and Related Materials, Tsukuba, Japan, May 11-5, 1998, pgs 369-72.	
		YUEN W. et al. "High-Performance 1.6 Micrometers Single-Epitaxy Top-Emitting VCSEL" Electronics Letters, IEE Stevenage, GB, vol. 36, no. 13, June 22, 2000 whole document.	

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Washington, DC, 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, Washington, DC, 20231.**

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